OECD Workshop on Extended Producer Responsibility: Lifting Barriers to EPR Approaches Helsinki, Finland May 11-13, 1998

SUMMARY OF WORKSHOP - PREPARED BY THE US EPA

The following is a summary prepared by the U.S. EPA of the presentations made during the second in the series of OECD workshops on extended producer responsibility (EPR). This workshop, entitled "Lifting Barriers to EPR Approaches," is part of the third (stakeholder input) phase of OECD's research program on EPR. The final outcome of the OECD research program will be a guidance document for governments considering establishing EPR policy.

This report is intended to highlight the proceedings rather than act as meeting minutes or a formal proceedings document. Papers submitted by the panelists detail the presentations.

SESSION 1: OPENING

Henrik Räihä (Ministry of Trade and Industry, Finland) opened the workshop and outlined three objectives he wanted to emphasize for the upcoming workshop discussions:

- Member countries should find and agree on similar and compatible solutions to avoid trade and market distorting effects.
- Because manufacturing processes and consumer behaviors differ for different products, there is no one solution for all products.
- Solutions should be equitable and practical for all parties. Mr. Räihä mentioned the link between this project and OECD's Regulatory Reform project, in which OECD countries have agreed that flexible and voluntary solutions are preferred to rigid, bureaucratic legislative measures.

Jean Cinq-Mars (OECD) discussed the link between waste and climate change. Keeping certain materials out of landfills and reducing energy usage during manufacturing by increasing recycling and reuse can reduce greenhouse gas emissions. He pointed out how this link renders more urgent the need for cleaner production processes and reduced waste. He also provided an overview of the phases of the OECD EPR project.

Jan Adams (OECD) outlined the links between EPR policy and trade. She stated that EPR policies are generally not protectionist but can challenge importers in the following ways:

- Information costs are higher for foreign countries and can have a greater impact on small enterprises and developing countries.
- Market fragmentation impacts can be difficult if different markets lack standardized requirements (e.g., recycled content requirements).

- Importers experience extra effects with respect to EPR packaging requirements, because more packaging is involved in general, and transport and deposit systems can be onerous..
- Nonstandard packaging (i.e., packaging that uses indigenous materials) can cause difficulties.
- Surpluses of recyclable materials on the market can precipitate predatory pricing and dumping.

Ms. Adams itemized potential multilateral trade issues as follows:

- To comply with WTO transparency and technical assistance requirements, comment should be solicited on proposed policies and developing countries should receive special attention in terms of information and technical assistance.
- WTO requirements call for nondiscrimination so that imported products enjoy equal opportunities. These requirements apply to product sale and distribution, not to postconsumer use.
- Mandatory technology requirements in EPR policy might be considered barriers under WTO if they are more trade restrictive than is needed.

In conclusion, Ms. Adams stated that WTO requirements should not be barriers to EPR policy implementation if they are nondiscriminatory and are not more restrictive than is necessary.

Lars Åhman (Swedish Tyre Recycling, Sweden) gave an overview of the PRO system for recycling tires in Nordic countries.

The Tyre Recycling Ordinances were passed in 1994–1995 and the system, which now covers 90 percent of manufacturers, began operating in 1995–1996. Free riders are few. Consumers who buy tires pay separate fees to cover recycling costs. Importers and domestic manufacturers are subject to the same requirements.

Countries have similar systems in which nonprofit organizations, owned by tire suppliers, administer the contractors covering all tire recycling operations. These nonprofits play the following roles:

- *Financing*—Collect recycling fees for new tires, which are based on tire size.
- *Administration*—Provide free collection sites at which consumers can deposit their used tires.
- *Control operations*—Oversee the contractors handling operations.
- *Reporting*—Report annually to environmental authorities on behalf of tire suppliers.
- *Support research and development*—Conduct research to help solve technical issues (e.g., improving grinding processes).

The ordinances set up the framework for the program, and tire suppliers were given full responsibility to manage their systems within that framework. The ordinances did not dictate how the system would be implemented.

The goals of the programs were to:

- *Establish a nationwide system.* There are 120 collection sites in Sweden and Finland.
- *Recycle 80 to 90 percent of all scrap tires by 2000.*
- *For collected tires, reuse, recycle, and use as an energy source, in that order.*

In 1997, 88 percent of scrap tires were collected and 82 percent were "recycled." Half the recycled tires were used as fuel, 35 percent were used as raw material, and the remainder were reused.

Juha Kaila (Finnish Technical Research Center, Finland) spoke about the free trade and competition effects of EPR on existing waste, secondary materials, and products markets. He based his remarks on Finnish experiences with the tire recycling system and implementation of the EU packaging and packaging waste directive.

Mr. Kaila noted that there are potential and actual conflicts between actors along the materials chain. Because rules differ according to whether a material or product is considered waste, actors in the chain play different roles and must follow different rules. Especially when end-of-life products and waste materials have positive economic value, EPR policy raises issues like:

- When does ownership of a material or waste cease (i.e., can the waste producer choose to whom to sell or give waste)?
- Can a municipality expand or change its paper collection and recycling system after EPR is applied?
- Can an independent recycling company set up a competing collection system?

Some potential causes of the competition conflicts arising from EPR policies include:

- Obligation for waste producers to get the material or product to the collection system
- Waste ownership issues
- Exemptions to importers
- Subsidies for existing waste collection systems but not others
- Potentially discriminatory fees managed by authorities

In conclusion, public sector involvement in EPR programs must be well defined, open, and fair to all stakeholders, and all rules for the private sector should apply equally to all companies. Also, all EPR systems should be designed and applied so any company can gain competitive advantage from waste prevention.

SESSION 2: THE POTENTIAL EFFECTS OF EPR ON COMPETITION

Terry Winslow (OECD) spoke about the relationship of EPR policies to competition policy and law. He stated that insofar as EPR seeks to internalize the environmental costs of products, and thereby attempts to correct a market failure and seek more efficient use of resources, it is consistent with competition policy. If EPR policy deviates from cost internalization by using supplementary regulatory requirements, however, competition issues are more likely to arise. The real competition issues that may arise from EPR will vary from country to country due to legal and economic differences. Competition authorities should play a meaningful consultative role in developing EPR systems.

Resource allocation issues can arise when recycling targets, recycled content requirements, or other such rules are used. These forms of regulatory intervention can be beneficial when there is market failure, but they can also impose costs and even be counterproductive in some circumstances.

EPR laws should avoid erecting barriers to PRO formation, but Mr. Winslow said he saw no justification for encouraging PROs for this reason: To encourage PROs, the government would have to define them and in so doing might exclude efficient and innovative organizations. Producers have enough incentive to form PROs on their own.

While internalizing environmental costs may increase costs to producers and therefore may exclude some firms who cannot sell their products at prices that exceed the true cost of the product, this alone does not render EPR policy anticompetitive (i.e., harm to competitors stemming from being required to internalize costs is not anticompetitive). Protecting competition should not be confused with protecting competitors.

There is a real risk that PROs will try to allocate costs and benefits so as to disadvantage some of their competitors. Competition law enforcement is necessary and should suffice to remedy such violations and prevent monopolistic or other anticompetitive conduct as long as the problems do not stem from legislation.

Tero Kuitunen (Office of Free Competition, Finland) began by noting that the increasing importance of waste as a raw material has created new industrial branches, such as the recycling industry, which are growing and innovative. From a competition policy viewpoint, Mr. Kuitunen said he feels that these new industries should be regulated only when needed and that markets should be left to find the best means of operating. If the recycling industry behaves like the raw materials industries, there should be no reason for regulation.

Competition laws in Finland prohibit horizontal agreements on price fixing and limiting production or division of markets unless there are some efficiency benefits for customers. These laws also prohibit the abuse of a dominant market position. Before the current packaging and packaging waste law, which implements the EU Directive 94/62/EC, Finland had tax-based controls on some beverage packaging. The tax system was on soft drinks and alcoholic

beverage containers made of certain materials. Exemption from the tax could be achieved by implementing a collection and recycling system. The system was found to harm competition in Finnish beverage product markets because it discriminated against beverage packages manufactured from different materials. It was also discriminatory in the sense that it prevented wine manufacturers from being able to market wine in cardboard containers while milk or juice manufacturers were allowed to use this type of packaging. The packaging tax system was abandoned because it was found to conflict with the principle of producer responsibility. A packaging tax may lead packagers to believe they are free of the recycling and waste management responsibility set on producers. In addition, the spirit of the EU packaging and packaging waste directive is to use economic control measures sparingly and only when the producer associations do not succeed in obtaining their recycling objectives.

Mark Nelson (European Recovery and Recycling Association/Pepsi-Cola, Inc., Belgium) introduced the European Recovery and Recycling Association (ERRA), a group established in 1990 by 25 packaging producers and users. He spoke about the 10 pilot projects ERRA operates across Europe to examine multimaterial curbside programs, explaining that the experience of these pilots combined with experiences from other reference projects in Europe and North America form the basis for his positions. ERRA's position is that for fast-moving consumer goods, EPR is not the best economic or environmental solution for achieving waste minimization and does not provide consumers with clear signals to make environmental choices or to manage postuse solid waste. ERRA believes that variable pricing of household waste management is the most environmentally and economically successful alternative for meeting waste minimization goals. Arguments presented to support this position include:

- EPR is not needed to obtain source reduction in packaging; there are existing economic incentives for manufacturers to be efficient with materials, and the volume of packaging has decreased in the absence of EPR systems.
- Unlike the "user pays" or "polluter pays" system, an EPR system that places the costs of postuse waste management in the purchase price of a product removes incentives for consumers to handle and sort their waste responsibly.
- Setting up parallel systems for collecting and sorting wastes leads to an inefficient, expensive, and segregated waste management system.
- EPR hinders competition, leads to free rider problems, and affects a product's international competitiveness.
- The additional costs of EPR are too uniform across products and too low to stimulate design changes.

ERRA concludes that for fast-moving consumer goods, the user/consumer of any service, product, or packaging should be responsible at each stage for the specific environmental impact related to that stage and that the end-user of a product should pay for disposal at the time and point of disposal. ERRA recommends shared responsibility over the product's life cycle instead of extended producer responsibility.

Aart Dijkzeal (Ministry of Environment, Netherlands) spoke in place of Kees Clement about the Dutch experience with PROs, particularly with respect to packaging and its effects on competition. The Netherlands has several PROs for handling waste, including packaging, cars, batteries, and plastic agricultural liners. A system for collecting waste electronics and electrical products will begin in June this year. Some competition effects of PROs the Dutch have observed include:

- There is a greater volume of waste under the control of a few large firms.
- More market power can decrease recycling costs, but smaller firms may drop out.
- It is easier for larger recycling companies to invest in innovative recycling technologies.
- Incentives for cost reduction are important so consumers do not pay increasingly higher costs.

To keep environmental costs as low as possible PROs should:

- Try not to be explicit about the environmental costs because there is a tendency to then embed these costs in the product price, which can lead to reduced incentives for keeping these costs as low as possible
- Keep as much competition as possible between alternative products/materials in which environmental costs have to be internalized in the product price
- Make sure the EPR system creates no barriers to entry for new players
- Involve all stakeholders (e.g., consumers, producers, recyclers) in efforts to develop and implement the EPR scheme

The PRO system has its advantages and its disadvantages. Its imperfections can be rectified. It was recommended that industry be given the ability to find its own solutions without detailed government interference.

Joachim Quoden (Duales System Deutschland, Germany) spoke in place of Fritz Flanderka. He discussed the problems with competition and cartel law that arose in the past 7 years of the Duales System Deutschland's (DSD's) existence while EPR was being implemented for discarded primary packaging. Certain aspects of the legal framework for the system were put in place or modified to avoid competition problems. For instance, full legal involvement in DSD is open to all companies, domestic and foreign, so as to involve any willing participants. Also, distribution of profits to shareholders is forbidden to prevent companies participating in DSD from, in a sense, recovering part of the license fees, which would give them a competitive advantage over companies not involved in the corporation. German law allowed competitors within DSD to demand information about each other, which is prohibited by provisions in laws on cartels. To rectify this conflict, DSD has converted to a stock corporation. In addition, the supervisory board for DSD has members from all stakeholder groups.

To avoid placing foreign firms at a competitive disadvantage, no distinction is made between foreign and domestic firms in the sign-use agreements. This allows companies to register and use the "green dot." Also, DSD staff speak the languages spoken in the European Union so

foreign users of the sign can benefit equally from the support offered by DSD's sales department. In addition, DSD has transferred all rights to the green dot label to the company PRO EUROPE, which can in turn transfer these rights to systems in member states of the European Union. (At present, six systems use the PRO EUROPE symbol.) With the PRO EUROPE system, companies involved in international markets can avoid calculating the precise quantities of their packaging delivered to each country, and can print a single symbol on their packaging regardless of where the packaging will be sold.

To prevent competition conflicts from arising between different packaging materials, separate license fees for different materials are based on only the costs and necessary administrative expenses involved in collecting, sorting, and recycling the packaging.

Due to the time pressures for constructing such a large system in 18 months and the requirement to work with municipalities in implementing the collection system, DSD entered into some contracts with unreasonably high costs. These costs are being renegotiated when possible, but some parties are unwilling to change contract terms or enter into supplementary agreements.

The greatest problem for DSD has been free riders. Unfortunately, no solutions have been found to date.

SESSION 3: FREE-RIDING AND EXISTING AND ORPHAN PRODUCTS

Lauri Tarasti (Supreme Administrative Court, Finland) presented a case study on how to avoid free riders in EPR programs. In Finland, a contract between the Ministry of the Environment and the Finnish Packaging Association implements the packaging and packaging waste directive of the EU. The packaging association has established individual material units for each packaging material (e.g., paper, plastic, metal) that are responsible for implementing the obligations in the EU directive. Reporting requirements only apply to the larger firms, of which there are currently about 5,000. Government authorities supervise compliance with the packaging EPR obligations by conducting random sample checks.

The speaker stated that under this system, the free rider problem will ultimately only concern smaller enterprises and therefore will not significantly impact the targets. The industry association is entrusted to identify free riders and inform the authorities if they cannot succeed in persuading errant firms to fulfill their obligations. In addition, large wholesale dealers, who are parties in the government-industry agreement, have stated that they will ensure the businesses they work with fulfill their obligations under the packaging directive.

The system began in early 1998 and in the first 4 months had 5,000 members in the material units. It is too early to tell whether free riding will be a problem. If free riding becomes an issue, it will probably not be of great importance in terms of meeting defined targets. It is, nonetheless, an important issue because free riders receive an unfair competitive advantage and thereby demoralize the system. Major industry players have the incentive and the influence to

exert peer pressure on free-riding firms. Pressuring tactics could include limiting the free rider's right to take part in other organizations in the packaging markets, within the limits of free competition; changing conditions to reduce or eliminate the benefits of being outside the system; and using existing information channels to identify offenders. As a last resort, authorities must be able and willing to enforce participation, even though these measures should be deterrents mostly and only used in exceptional cases.

Report of Working Groups on Free Riding

Free riding is intentionally benefitting from a system without meeting part or all the system's responsibilities, including financial responsibilities. The biggest related problem is giving a competitive advantage to nonparticipants, especially when profit margins are small.

Modes of free riding include:

- Covert or public nonparticipation
- Collecting the fee but not paying into the system
- Nonpayment/underpayment
- Incorrect use of product markings
- Consumer direct importing

The scale of the problem depends on:

- System type—could be startup problem or inherent permanent problem
- Product, waste stream, number of actors, scope of obligation, legal framework

Methods of avoiding free riding include:

- Have legal framework—targets for all participants; balanced, enforceable goals and obligations; manifest and tracking systems
- Private cause of action for damages against free riders
- Make take back mandatory and exempt those who join the PRO
- Bring in larger players—cover more of the market share
- Threat of request for government legislation if free riders refuse to participate
- Use deposit system
- Make public information about who does and does not participate; exert peer pressure
- Label participating products

It is difficult to get 100 percent participation; the last percentage is particularly burdensome. It is possible to increase participation by removing regulatory barriers that reduce the costs of participation, avoiding monopolies, and exerting producer influence.

Report of Working Groups on Orphan and Existing Products

Orphan products are products whose producers no longer exist. These products function as free riders in that the system must cover their recycling costs. Existing products are those that are on the market before the EPR system is implemented. The costs of recycling these products are higher because they were not designed with EPR in mind.

There will always be a transition period when implementing EPR where there will be a glut of existing products.

Some countries (Australia, Norway) assess charges when new products are sold to cover the costs of recycling; thus, recycling of existing and orphan products is financed with fees on new products. Under this approach, one might ask whether society should pay for past problems. Alternatively, countries can use the fee collected at the time of disposal to finance recycling (Japan). This approach can lead to illegal dumping if fees are too high.

The magnitude of the problem depends on the:

- Cost of recycling
- Longevity of the product
- Cost of recycling relative to the sales price of new products
- Number of actors involved

In Germany, it is illegal to include orphan/existing products in the EPR program. If it is legal, and it is deemed a fair solution, legislation will be needed, because actors will not assume this responsibility voluntarily.

SESSION 4: EFFECTS OF EPR ON TRADE—PRACTICAL EXPERIENCE

Robert Guyer (Rechargeable Battery Recycling Corporation, United States) spoke about how the Rechargeable Battery Recycling Corporation (RBRC) overcame funding and regulatory barriers. He gave an overview of RBRC, describing it as a nonprofit public service company managing the collection and recycling of small dry cell rechargeable nickel-cadmium (Ni-Cd) batteries in the United States and Canada. The program was created in response to some American states mandating that battery manufacturers collect and recycle used Ni-Cd batteries. Over 250 manufacturers of rechargeable products, representing about 75 percent of the world's producers, voluntarily participate in RBRC by paying a license fee to display the RBRC seal. Mr. Guyer discussed RBRC's approach to the following problems:

- *Regulatory barriers*—State regulations mandating battery takeback and recycling first stipulated that battery manufacturers collect used Ni-Cd batteries. This was difficult for industry, because most battery manufacturers have little direct contact with the consumer. States began to recognize these difficulties, and the second-generation

legislation allowed for broader responsibility, including retailers who are critical because they have direct contact with consumers.

- *Allocating and assessing financial responsibility*—Industry wanted to conduct collection and recycling activities in the most cost-effective and efficient manner so as to minimize the effect of the program on costs to consumers. The program costs are assessed in the distribution chain as close to the consumer as possible in order to minimize price markups. License fees are levied on the rechargeable product manufacturer and are usually collected from the final product assembler, distributor, or retailer who knows the product is to be sold in the United States or Canada.
- *Antitrust law problems*—In the United States and many nations, collection of market share information, for the purposes of program cost allocation, can lead to lawsuits about anticompetitive conduct. Therefore, any legislation that requires cost allocation based on market share must contain provisions for addressing antitrust laws. International antitrust laws must be considered as well.
- *Tax law problems*—To eliminate the payment of income tax on recycling program funds, the RBRC was established as a nonprofit public service company. However, Canadian tax law did not explicitly provide for a U.S. nonprofit corporation operating in Canada. RBRC was required to incorporate a Canadian subsidiary, which meant incurring additional corporate overhead costs. This type of problem must be addressed for programs worldwide.
- *Barriers for collection and shipping*—Used products containing Ni-Cd batteries were technically considered hazardous waste. In 1995, the U.S. EPA promulgated the "Universal Waste Rule," which deregulated common hazardous wastes, including waste batteries, to allow collection and shipment without use of a federal hazardous waste manifest or hauler. Not all states adopted this rule, however. In 1996, the United States promulgated the "Mercury-Containing and Rechargeable Battery Management Act," which required all states to regulate the collection, storage, and transport of hazardous waste batteries under the Universal Waste Rule. International restrictions on transboundary movement of certain hazardous wastes for recycling may similarly be counterproductive to worldwide efforts for product stewardship.

Rozelle Hunter (BIAC) spoke about four trade issues that arise with takeback schemes:

- *Material bans, design and materials choice rules, and labeling requirements*—Divergent rules make it difficult for producers who sell to different markets. It is difficult to meet all requirements and follow changes to the rules. With complex products, it is difficult to know all the substances in the product.
- *Collection obligations/targets*—Domestic producers have clear advantages, because they are familiar with the existing collection system(s) and the logistics for arranging recycling are simpler.
- *Reporting obligations*—Local producers again have an advantage. If foreign producers do not have a big market share, it may not be worth the effort and cost of reporting (e.g., reporting compliance plan and annual reporting). Also, in some cases it is difficult to

identify the responsible reporting party, such as in the case of an Internet marketer or another direct importer.

- *Used product handling*—It is not always clear how different countries treat used products being transported for recycling in terms of whether these materials are subject to waste shipment rules.

In summary, the speaker felt there is high potential for EPR systems to create trade barriers and that countries should ask whether these problems are worth the benefits to society.

Claes von Ungern (Finnish Forest Industries Federation, Finland) discussed his vision of the practical elements of implementing the EPR obligations that involve waste paper. He believes there is a need for a common system across Europe, because countries have different targets for waste paper collection. As demand for recovered paper content products grows, virgin producers will enter the recovered paper market. Costs for collection and sorting will increase. There will be a growing role for large waste management companies, who will gain a lot of control. This will lead to an increase in recovered paper prices. The European paper industry will restructure. Big paper companies will work with big waste management companies. The end result will be that waste-based products will cost more.

Juan Careaga (International Trade Centre, Switzerland) gave an industry view of the trade difficulties EPR presents to developing countries. In practice, developing countries are often at a disadvantage and become less competitive due to a combination of factors, including lack of information about EPR requirements and limited access to technology, financing, and environmentally friendly raw materials. Often, developing countries' exports are low value-added products that compete based on prices in international markets. Therefore, developing country producers find it difficult to make the investments needed to meet environmental standards. Producers in developing countries also often have difficulty submitting and obtaining packaging for evaluation and certification, especially if on-the-spot inspection of production and packaging facilities is required. In addition, lack of timely and accurate information on projected or existing EPR requirements seem to be at the source of many problems in developing countries.

The speaker made several recommendations to ease trade effects for developing countries:

- Provide appropriate transparency of emerging environmental policy instruments and ensure they are nondiscriminatory for foreign producers.
- Establish appropriate transitional provisions to allow producers to adjust to new requirements.
- EPR requirements should be no more trade restrictive than is needed to achieve their environmental objectives.
- Provide technical and financial assistance to developing country producers to help them adjust to new environmental requirements.
- Provide exemptions for small-volume materials.

SESSION 5: WTO ISSUES —LEGAL ASPECTS

Mirelle Cossy (World Trade Organization) focused on two areas in which WTO rules would come into play when EPR restrictions are applied to goods traded internationally: (1) General Agreement on Tariffs and Trade (GATT), and (2) the Agreement on Technical Barriers to Trade (TBT Agreement).

The GATT has several provisions aimed at nondiscrimination for internationally traded products:

- *Border tax adjustments*—Taxes and charges on imported goods must not discriminate between imported and domestic like products. Eco-taxes would be subject to these general rules.
- *National treatment obligation*—There must be an effective equality of opportunities for imported products with respect to the application of laws, regulations, and requirements affecting the internal sale, offering for sale, purchase, transportation, distribution, or use of products.
- *General exceptions*—Exemption permits may be granted if measures are found to be needed to protect human, animal, and plant life or health or if they relate to the conservation of exhaustible natural resources.

The TBT Agreement aims to ensure that technical regulations and standards, including packaging, marking, and labeling requirements, as well as conformity assessment procedures, do not create unnecessary obstacles to international trade. Technical regulation must not discriminate between imported and domestic goods and among imported goods from various countries. Even voluntary standards are expected meet the requirements for technical standards of nondiscrimination, avoiding unnecessary obstacles to trade, basing national standards on existing international standards, and ensuring transparency through regular publication and notification of proposed standards.

In conclusion, the speaker noted that trade rules should not be major impediments to the implementation of EPR programs, because it should be relatively easy to realize equal treatment and avoid violating nondiscrimination provisions. Factors that could cause trade effects include excessive information costs, market fragmentation, disproportionate burden on importers, problems with low-volume/nonstandard packaging, and trade in collected recyclables. Ensuring transparency in the preparation and implementation of the program (including notification and consultation with all interested parties), striving to favor, whenever possible, international harmonization of programs and standards and considering the situations of developing countries will play an essential role in preventing potential trade disputes.

Mitsutsune Yamaguchi (Keio University, Japan) talked about the Packaging Recycling Law of Japan and its effect on trade. Mr. Yamaguchi explained that the law, enacted in 1995 and made effective in 1997, requires households to separate packaging waste and local governments to collect, wash, and store waste. Manufacturers then, including importers, are responsible for

collection of the waste from municipalities and recycling or reusing it. Participation at the municipal level, however, is voluntary. Manufacturers are only obliged to collect and recycle materials from those municipalities that participate. Manufacturers may transfer their responsibility to authorized entities, ask another independent party to assume their duties, or fulfill their obligations themselves. Small and medium enterprises are exempt from their obligation until 2000.

There have been no trade effects to date, but it is early to draw conclusions. Reasons cited for the lack of problems include that:

- The law does not discriminate against importers and importers can fulfill their obligations like domestic producers do.
- The speaker concluded that the law is presently not more trade restrictive than is needed to fulfill the legitimate objective of environmental protection and therefore does not violate the Technical Barriers to Trade Agreement. He made the point that although the TBT Agreement calls for notification of such regulations when they are being developed, countries are not following these guidelines.

He noted that there is a lack of incentive for household participation because unit-based pricing for waste disposal is absent. Also, producers don't assume responsibility unless local governments voluntarily join the scheme. In 1997, between 716 (for PET bottles) and 2,473 (for aluminum cans) of 3,300 local governments are believed to have participated.

Currently, there is a draft bill covering household electric and electronic equipment recycling. Under this draft, manufacturers and importers would be obliged to collect (mainly through retailers) and recycle this equipment. At first, the bill will cover televisions, refrigerators, washing machines, and air conditioners. Retailers have to take back this equipment from the consumer, even if they do not sell the equipment, and return it to the proper manufacturer or importer, who must recycle it. The draft allows the manufacturers/importer to charge for the cost of recycling at the time of collection.

If this law is enacted, it may affect domestic SMEs and importers; leading domestic manufacturers are already researching the most cost-effective ways to recycle their goods. If they succeed, they will have a competitive advantage for a time, because their recycling fees may be lower than those of other manufacturers/importers.

Jan Wescott (The Brewers of Ontario, Canada) talked about Ontario's Environmental Levy on alcohol containers as a case study of EPR and international trade. The 5 cents per container levy, applied to all domestic and imported beverage alcohol containers, was introduced in 1989. Containers that were part of a comprehensive deposit-return system were exempt from the levy. The levy was to act as an advance disposal fee, reflecting the waste management costs of nonreturnable containers. In 1990, two U.S. brewers filed 301 petitions with U.S. Trade Representative under U.S. domestic trade legislation complaining about retail access in all provinces, markups, cost-of-service charges, and listings. Initially, complaints did not include

the environmental levy. In response to formal GATT consultations, a GATT panel was formed to examine the original complaints as well as the environmental levy.

The United States argued that the levy could be applied in a less trade-restrictive manner and that in its current form was inconsistent with the National Treatment provision because importers have no commercially reasonable means of collecting their empty beer containers. It further argued that this problem could be rectified if importers were granted the right to establish private distribution networks. Canadians argued that the levy was nondiscriminatory and that there were no less restrictive measures available to achieve the environmental objectives.

In 1992, the GATT panel found that the levy was not inconsistent with Article 111:2 of the General Agreement, and it noted that at issue was not the levy itself but the levy's application as it related to restrictions on access to retail points of sale and the ability to establish private distribution networks. During the next year, with the threat of sanctions from the United States, the doubling of the Canadian levy, the imposition of a 50 percent ad valorem duty on the part of first the United States and then Canada, involvement of the U.S. environmental lobby, and final negotiations, Canada and the United States signed a Memorandum of Understanding (MOU) in August 1993. Through the MOU consultation process, the US negotiated lower cost-of-service charges, immediate access to The Beer Store, and minimum prices tied to alcohol levels; but there were no changes made to the levy.

This case was instrumental in the United States adopting legislation requiring the federal government to consult with states on future trade actions with potential impacts on subnational governments. In addition, the case helped educate and galvanize environmental group activity around NAFTA and assisted in the efforts to demand a "side agreement" on the environment as a precondition of congressional NAFTA approval. The speaker noted that this case proves that countries' environmental policies may easily be subject to challenge from foreign trading partners.

Julian Morris (The Institute for Economic Affairs, UK) introduced a typology to differentiate between EPR schemes and presented his interpretation of the potential impacts on the trade associated with each type. He began by discussing the "polluter pays principle," noting that the conventional meaning of *polluter* is a person or an organization that contaminates the environment, whereas recent meanings include any person or organization producing a good that, if disposed of in a certain way, might cause pollution.

Mr. Morris distinguished between EPR programs in terms of their definition of *polluter:*

- *Type I EPR*—Defines the polluter as the party most directly responsible for contaminating the environment. This type roughly coincides with the systems of private contracting for waste services that are common in industry and for residents is called unit-based pricing. This type promotes a form of shared responsibility that can include raw material extractors, manufacturers, and consumers.

- *Type II ERP*—Defines the polluter as the party or parties responsible for producing a good that may be disposed of in a way that contaminates the environment. It roughly coincides with mandated product takeback programs, such as the EC Directive on Packaging and Packaging Waste.

Mr. Morris said that, in a Type I scheme, the polluter, in paying the marginal cost of waste disposal, chooses the most efficient modes of consumption and disposal. In turn, producers would respond to consumer demands for goods that use resources more economically over their full life cycles. As a result, both expenditures on waste management and levels of pollution would decline, leaving the consumer with more money, precipitating positive effects on trade and wealth.

On the other hand, Mr. Morris said that the Type II scheme typically requires a certain percentage of product waste to be recovered and recycled and thereby diverts resources from wealth-creating activities to recovery and recycling. He believes the development of environmentally superior technologies would be restricted under this scheme, because manufacturers are more likely to choose homogenous materials that are relatively easy to decontaminate, such as glass. It also reduces the pace of introducing new technologies, since it would be more difficult to use parts recovered from old products in new products. Also, Type II schemes encourage recycling, which may not be the most environmentally friendly option. Mr. Morris said he believes that Type II schemes tend to increase production and distribution costs and thereby will reduce the volume of trade, both in the affected goods and others.

SESSION 6: IMPLEMENTATION OF EPR PROGRAMS

Erja Fagerlund (European Commission) spoke in place of Marco Onida about the EU's proposal for End-of-Life Vehicles (ELVs). The EU felt there was a need for an EPR approach to ELVs to address the following types of issues:

- *Environmental*—Up to 7 percent of discarded vehicles are abandoned in the environment. Dismantling and shredding, when done improperly, can release hazardous fluids, and components containing heavy metals are often disposed of in landfills. Metal fraction recycling, when done improperly (e.g., heavy metal or chlorinated components are not removed during dismantling), can emit toxins. The ELVs sold as secondhand cars to Third World countries damage the environment because those countries lack environmental protection standards.
- *Economic*—As steel prices decrease and disposal costs increase, ELVs begin to have a negative market value. This negatively impacts the dismantling and recycling industry and favors businesses in those countries with less stringent environmental standards for dismantling and recycling ELVs. Also, the nonrecovery of a substantial fraction of ELVs represents a resource loss.

The EU considered different organizational and financial schemes for EPR. The organizational schemes considered for ELVs included:

- *Pure*—Producers, by decree, are given full takeback and recovery responsibility. This option would ensure that all disposal costs are internalized. However, because the producers are few, the lack of competition may fail to motivate producers to make design changes and keep disposal costs low.
- *Soft*—Producers, dismantlers, recyclers, or public authorities share responsibility for ELV takeback and recovery. While this would better preserve the independence of dismantlers and recyclers, it would be difficult to identify who is responsible for what and it would therefore be difficult to enforce all aspects of the program.

The EU chose the second option and delegated the task of allocating precise responsibilities of the various economic operators to member states, with the understanding that the pure organizational scheme was not an option.

Financial responsibility can be approached by charging consumers when they purchase new vehicles (advance scrap premium), which allows financing recycling of existing ELVs. This approach has difficulties; assessing fees that reflect actual costs and managing funds so anticompetitive behavior does not distort economic efficiency are challenging. The EU did not take this approach, rather choosing an approach that relies more on market forces. The EU proposal establishes that member states ensure that any costs incurred by the last owner at delivery of the vehicle to an authorized treatment facility, as a result of the vehicle's having a negative market value, shall be reimbursable by the vehicle dealer acting on behalf of the producer, unless the dealer decides to take back the ELV at no cost to the last owner.

June-Woo Park (Sangmyung University, Korea) spoke about EPR systems in Korea. He explained that producers are responsible for recycling wastes under a deposit-refund system for:

- Beverage and food containers that are paper packs, aluminum cans, steel cans, glass bottles, and PET bottles. Producers are responsible for collecting and recycling this packaging.
- Televisions, washing machines, air conditioners, lubricating oils, tires, and batteries. Producers are responsible for recycling these waste products.

Producers reclaim their deposits when they collect the waste according to the volume of waste collected. Residents pay for the waste collection of nonrecyclable wastes but are not charged for recyclables if they are sorted properly.

Producers have formed or are forming independent PROs for tires, oils, and electronics. Packaging waste recyclers have organized individual material recycling associations (i.e., separate associations for paper, glass, cans, PET, plastic, and Styrofoam), which receive the deposit money. Most producers or recyclers associations contract with private collectors and processors. The PROs are limited in their activities and need legal support. They receive some government subsidies, as well.

There is a public enterprise for recycling, the Korea Resource Recovery Corp. (KRRC), which is in charge of collecting and processing nonprofitable recyclables that are not covered by private recyclers. KRRC has recently expanded into some profitable areas, which has spurred complaints from private businesses who claim KRRC has an unfair competitive advantage because it is government funded.

Korea is considering different options to introduce an integrated form of PRO so participating producers can receive exemptions from deposit duties. This should enhance recycling efficiency and reduce the financial burden to producers. Stakeholders are debating different schemes for this structuring.

The problems Korea has faced in implementing EPR programs include:

- Dealing with resistance from producers and existing recycling organizations
- Addressing free riders
- Identifying who will initiate the organization of the PRO and determining how to encourage its formation
- Determining how deposit fees should be set

SESSION 7: WORKSHOP SUMMARY/SESSION 8—NEXT STEPS

During Session 7, participants reviewed and commented on the extended outline developed by the drafting group the prior evening. This outline summarized the issues and points made throughout the sessions and will form the basis of the chapters concerning the barriers to EPR in the forthcoming guidance document.

In the closing session, the chairman announced that the third workshop would be held in Washington, DC, on December 1–3, 1998. This workshop will focus on the following topics:

- EPR approaches to specific product sectors
- Mandatory, negotiated, and voluntary program approaches
- Economic factors associated with EPR programs
- Economic efficiency and environmental effectiveness of EPR approaches